



MIST

Military Institute of Science and Technology



Technology for Advancement

MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY



**INAUGURAL CEREMONY OF MIST- 19 APRIL 1998
HONOURABLE PRIME MINISTER OF PEOPLE'S REPUBLIC OF
BANGLADESH SHEIKH HASINA UNVEILLING THE FOUNDATION PLAQUE**

ABOUT MIST

Military Institute of Science and Technology (MIST), the pioneer technical institute of armed forces, started its journey from 19 April 1998. The honourable Prime Minister, People's Republic of Bangladesh, Sheikh Hasina unveiled the foundation plaque. First academic program was launched on 31 January 1999 with the maiden batch of Civil Engineering (CE). The pioneer batch comprised of only military students. Civil students (both male and female) were admitted to various disciplines in the session 2002-2003. 10th batch of CE students have already graduated on 06th Mar 2012. These graduates are proving their worth in higher studies and professional assignments both in home and abroad.

Foreign students were admitted first time in session 2008-2009. MIST envisages creating facilities for military as well as civil students from home and abroad dedicated to pursue standard curriculum leading to graduation and post-graduation degrees. As an institution MIST is already on steady stride upholding its motto '**Technology for Advancement**'. The institute remains committed to contribute to the wider spectrum of national educational arena and plays a significant role in the development of human resources.



ATTRIBUTES OF MIST

- Rigorous admission and selection process for best possible screening.
- Interactive sessions in the classroom.
- Regular guest lectures and educational visits.
- Culture of timeliness, commitment and uninterrupted curriculum.
- Flexibility in choosing competent faculties through outsourcing.
- Well thought-out and continuous feedback and assessment system.
- Effective teaching through innovative method.
- Industrial attachment for on job training.
- Emphasis on code of conduct and dress code.
- Focus to develop students as good human with all possible attributes of successful leader.
- Tranquil, pollution free and secure campus life.

OBJECTIVES

- To establish a prestigious academic institute for studies in different fields of engineering and technology for military personnel and civil officials/ students from home and abroad at degree and post graduate levels.
- To organise courses on military science and technology in various areas of interest.
- To hold examinations and confer certificates of diplomas/ degrees, other academic distinctions, to and on persons who have persuaded a course of study and have passed examinations conducted by the institute.
- To confer research degrees, award fellowship, scholarship, exhibition, prizes, medals and honorary degrees to persons who have carried out research works under conditions as prescribed in the MIST regulations.
- To make provisions for advisory, research and consultation service including supervisions, material testing and to enter into suitable agreement with any person/organisation for this purpose.
- To co-operate with Universities/ Technical Institutions (both military and civil) including signing of Memoranda of Understanding (MOU) at home and abroad, in the manner and purpose as the institute may determine.
- To do such other acts, related to above-mentioned objectives, as may be required in order to expand the objectives of the institute.

CAPABILITIES

- To conduct under-graduate programs leading to B.Sc. Engineering Degrees in the following disciplines:
 - Civil Engineering (CE)
 - Computer Science and Engineering (CSE)
 - Electrical, Electronic and Communication Engineering (EECE)
 - Mechanical Engineering (ME)
 - Aeronautical Engineering (AE)
 - Naval Architecture and Marine Engineering (NAME)
- To conduct post graduate/ masters program.
- To conduct diploma courses in surveying & mapping.
- To conduct diploma and certificate courses in CSE.
- To conduct professional advanced courses.

AFFILIATION

All academic programs of MIST are affiliated with Bangladesh University of Professionals (BUP). It may be mentioned here that BUP was established as the 30th public university of Bangladesh on 05 Jun 2008. Ten colleges/ academies/ institutions are affiliated to BUP including National Defence College (NDC), Armed Forces Medical College (AFMC), etc. All examinations are conducted as per the schedule approved by the same university. BUP also approves the results and awards certificates amongst the qualified students.

DEPARTMENTS

Department of Civil Engineering

Focussing on creating a positive, interactive learning environment, the Department of CE produces top-notch engineers and leaders for the next generation. The department started its journey as pioneer department with 40 military students in 1999. It is now providing the most sophisticated and updated technological support in the field of civil engineering. In addition, the program's emphasis on engineering sciences and design; provides students with ample opportunity to put their knowledge into practice by solving real-world problems under the guidance of our readily approachable faculty members. This department is enriched with highly experienced and disciplined teaching staffs having wide vision. The department plays a very important role in the country's infrastructural development. Many important construction works and projects in the field of structural, geotechnical, transportation and environmental engineering are carried out with the consultancy services of this department. Various tests regarding material properties, constructional quality control, etc are carried out in the laboratories.



Department of Computer Science and Engineering



Department of CSE started from the academic session in 2000-2001 as department of CSIT with only military students. Civil students were admitted from the next session. It was renamed as Department of CSE in January 2003. Over the years, this ever-flourishing department has been providing the technical foundation, scholarly guidance and leadership skills that have resulted in a number of highly qualified and skilled computer graduates, proving their potentiality at home and abroad. With educated, sincere and enthusiastic faculty, a continuous enrolment of brilliant students and an amicable teacher-student interaction the department has become a unique one in its field. Major areas of specialities are software and hardware.



Department of Electrical, Electronic and Communication Engineering

EECE Department started its journey in 2003 with 45 students. The main focus of the EECE Department is on three major areas: power, electronics and communication in the undergraduate curricula. The expertise of the faculty members of this department ranges from power systems to VLSI technology. The research areas of teachers and students of this department include satellite navigation, radar detection and tracking, optical fibre communication, broadband wireless communications, renewable energy, thin-film technology, power system, electrical machines, solid state device, signal processing, image processing, device modelling, power electronics, control engineering, high voltage engineering, etc. The

department provides well equipped laboratories with the latest models of PCs and state of the art equipment.

Department of Mechanical Engineering

ME Department commenced undergraduate program from January 2003 with 45 students. Mechanical engineering is generally understood to emphasise on energy, its transformation, transmission, utilisation, and applied mechanics & design. The ME program provides excellent technical background. Throughout the study program considerable emphasis is placed on the development of systematic procedures for analysis and design, and on the responsible use of technology. In addition to lecture and practical sessions in classrooms, the undergraduate program also includes industrial visits and on-site industrial training. The department is organised into three major divisions: thermal engineering, fluid mechanics and applied mechanics.



Department of Aeronautical Engineering

To fulfil the service requirements and facilitate space based research MIST has started AE program from Feb 2009 with 65 students. The AE undergraduate program provides an excellent technical background for persons who want to work in the field of aviation. The new generation of Aeronautical engineers is encouraged to undertake research and development activities in the areas of aerodynamics, aerospace propulsion, aircraft loading & structural analysis, aerospace vehicle design, space engineering, advance aerospace technology and other discipline. This department is committed to the study and analysis of fundamental as well as applied problems. The department is organised into two major divisions: aerospace and avionics.

Department of Naval Architecture and Marine Engineering

To fulfil the service requirement and also the need of technical expertise at home and abroad, MIST will step forward with a new department, Naval Architecture and Marine Engineering from 2012 – 2013 session. Initially NAME will start with 30 students. The NAME undergraduate program will provide an excellent technical background for persons who want to work in the field of shipbuilding and marine engineering. A career in Naval Architecture and Marine Engineering is very exciting, challenging and rewarding. It includes shipbuilding industry (commercial, private and defense related), passenger transportation, Navy and Coastguard activities (offshore oil, gas and mineral protection) and recreational boating and sailboat industry. The field is rich in tradition, yet modern, technologically challenging and very progressive. Future Naval Architects will be encouraged to undertake research and development activities in the areas of merchant and warship/port/harbour/ocean structure design, propulsion and shafting arrangement, hydrodynamics, and structural analysis of different types of ships, advance marine technology and other disciplines. In addition to lecture and practical sessions in classrooms, the undergraduate program will also include 4 weeks internship program at different shipyard/ dockyard, industrial visits and on-site industrial training. The department will be organised into two major divisions: Naval Architecture and Marine Engineering.



Department of Science and Humanities

As a supporting department it is committed to impart the basic knowledge to the students of various engineering disciplines on the non-departmental subjects. This department enriches the human faculty of a student through various pivotal activities in order to make him a complete professional. Perceptive instructors guide the students through auspicious lessons to enhance the knowledge of future potential engineers through immaculate ideas. The major areas of studies are Physics, Mathematics, Chemistry, English, Economics, Sociology, Accounting etc.

FACULTY MEMBERS

A group of qualified instructors, teachers drawn from military as well as from civil society including from international arena are relentlessly engaged in imparting knowledge to the students. In addition, teachers from reputed universities Bangladesh conduct classes on particular subjects/ courses. Guest speakers/teachers from various organisations/institutions/universities are also invited to participate in teaching programs, lecturers, seminars etc.

INTAKES

Intake of students in each of the B.Sc. Engineering Program of CE, CSE, EECE, ME and AE is 65. Intake for NAME will be 30. Both male and female students are eligible for admission in MIST.

NUMBERS AND DURATION OF TERMS

There are two regular terms each of 22 weeks duration in an academic year for all engineering programs. Classes of each academic year normally start in the 1st weeks of February. The academic activities are conducted as per academic calendar approved by Academic Council of MIST before commencement of the programs.

Ser	Events	Duration (Weeks)
1.	Classes	07
2.	Mid Term Break	01
3.	Classes	07
4.	Recess before Term Final Examination	02
5.	Term Final Examination	03
6.	Term End Break	02
Total:		22

RECOGNITION OF PERFORMANCE

Osmany Memorial Gold Medal

Awarded to the best student amongst all the MIST Medal holders.

MIST Medal

Awarded to all students earning CGPA 4 at the end of the entire program and the first position holder in each dept earning a minimum CGPA of 3.80

Commandant's List

- All students earning CGPA ≥ 3.8 at the end of each academic level for level 1, 2 and 3
- All graduating students earning CGPA ≥ 3.8 considering results of entire program (level 1 to 4)

Dean's List

- All students earning $3.7 \leq \text{CGPA} < 3.8$ at the end of each academic level for level 1, 2 and 3
- All graduating students earning $3.7 \leq \text{CGPA} < 3.8$ considering results of entire program (level 1 to 4)

Scholarships and Stipends

- Chancellor's (BUP) Scholarship
- Vice Chancellor's (BUP) Scholarship/ Stipend
- MIST Scholarship
- MIST Stipends
- Osmany Memorial Trust Scholarship
- Buro Bangladesh Stipend
- Chief of Army Staff Scholarship
- Chief of Army Staff Stipend
- Chief of Naval Staff Scholarship
- Chief of Air Staff Scholarship
- Brig Gen Kamal Scholarship
- Brig Gen Kamal Stipend

FACILITIES AND SERVICES

Accommodation

MIST, in principle is a residential institute. The modern residential hall named 'Osmany Hall' can accommodate 520 students (male 260 and female 260). Each room has internet browsing facilities. There are also two 14 storied teachers' family quarters for permanent teachers.

Library

MIST has a well-arranged library enriched with about 40,000 books and a good number of periodicals, journals and magazines from home and abroad. It also subscribes a number of Bangla and English newspapers and periodicals. In addition to that each department has its own library enriched with adequate text and reference books. It also subscribes e-journals.

Medical Support

Civil students are provided with medical support by MIST medical centre. MIST Medical centre provides required medicine and other necessary support as prescribed by the Medical Officer. Civil student can be sent to Azmol Hospital (Mirpur 10), 3 km away from MIST for further treatment.

Fitness Centre

Fitness Centre provides ample opportunity for the students to keep their body and mind fit.

Cyber Café

Cyber café provides internet browsing facilities to students and faculties.

Sports and Recreation

MIST has got adequate facilities for both indoor and outdoor games including table tennis, badminton, football, and cricket. Students can also enjoy a wide variety of athletic pursuits. Besides, picnics, cultural competition, celebration of national days are also arranged regularly in befitting manner.

Debating Society

MIST Debating Society (MISTDS) arranges debate on regular basis.

Cultural Programs

To break the monotony of study different cultural programs are arranged at regular intervals.

Centre for Advisory and Testing Services (CATS)

CATS provide consultancy, advisory and testing services to government and non-government organizations.

Cafeteria

Cafeteria provides an inexpensive meal with different types of cuisine on offer.

REGULATORY BODIES

Council of MIST

❖ **Chairman:** Honourable Minister of Education, Government of the People's Republic of Bangladesh

❖ **Vice Chairmen:**

- Chief of Army Staff, Bangladesh Army
- Chief of Naval Staff, Bangladesh Navy
- Chief of Air Staff, Bangladesh Air Force

❖ **Members:**

- Principal Staff Officer, Armed Forces Division (AFD)
- Engineer in Chief (E in C), Army Headquarters (AHQ)
- Vice Chancellor (VC), BUP
- Commandant, MIST
- Representative of the Ministry of Defense (MOD)
- Representative of the Ministry of Finance
- Representative of the Ministry of Education
- Representative of the Ministry of Science and Information and Communication Technology
- Director Academic (Dean), MIST
- Representative of the VC, DU
- Representative of the VC, BUET

❖ **Secretary:** Colonel Staff, MIST

Governing Body of MIST

❖ **Chairman:** Commandant, MIST

❖ **Vice Chairman:** E in C, Bangladesh Army

❖ **Members:**

- Representative of AFD
- Director Military Training, Bangladesh Army
- Director Naval Training, Bangladesh Navy
- Director Air Training, Bangladesh Air Force
- Director Academic (Dean), MIST

- Director Research & Development (R&D), MIST
- Director Administration, MIST
- Representative of the VC, DU
- Representative of the Faculty of Science, DU
- Representative of the VC, BUET
- Representative of the VC, BUP
- Representative of MOD

❖ **Member Secretary:** Colonel Staff, MIST

Academic Council of MIST

❖ **Chairman:** Commandant, MIST

❖ **Members:**

- Representative of Training Directorate, AFD
- Representative of Military Training Directorate, AHQ
- Representative of Naval Training Directorate, NHQ
- Representative of Air Training Directorate, Air HQ
- Director Academic (Dean), MIST
- Director R&D, MIST
- Director Administration, MIST
- Colonel Staff, MIST
- Heads of all Departments, MIST
- All Senior Instructors/ Professors of MIST
- Representative of the VC of DU
- Representative of the VC of BUET
- Representative of the VC of BUP
- Representative of the Academic Council of DU
- Representative of MOD
- Representative of Ministry of Finance
- Representative of Ministry of Education

❖ **Member Secretary:** General Staff Officer Grade-1 (Academic), MIST

ELIGIBILITY FOR ADMISSION TEST

Bangladeshi Students

Minimum qualifications to take part in the admission test are as follows:

- Applicants must have passed SSC/ Dhakhil/ equivalent examination from Board of Intermediate and Secondary Education/ Madrasa Education Board/Technical Education Board in Science group with minimum GPA 4.00 in a 5-point scale.
- Applicants must have passed HSC/ Alim/ equivalent examination from Board of Intermediate and Secondary Education/ Madrasa Education Board/Technical Education Board in Science group with minimum GPA 4.00 in a 5-point scale.
- In HSC/ Alim/ equivalent examination the applicant must have obtained minimum 'A' grade in any two (02) subjects out of four (04) subjects including Mathematics, Physics, Chemistry & English and minimum 'A-' (A minus) grade in rest two (02) subjects.
- Applicants with GCE 'O' Level/equivalent background must have to qualify in minimum five (05) subjects including Mathematics, Physics, Chemistry and English with minimum 'B' grade in average [i.e. A= 5, B= 4, C= 3, D= 2 & E= 1, minimum required grade point = 20].
- Applicants with GCE 'A' Level/equivalent background must have to qualify in minimum three (03) subjects including Mathematics, Physics and Chemistry with minimum "B" grades separately.
- Applicants who have passed HSC or equivalent examination in the current year or one year before the notification for admission can apply.
- Sex: Male and female.

Foreign Students

Maximum 3% of overall vacancies available will be kept reserved for the foreign students and will be offered to foreign countries through AFD of the Government of the Peoples Republic of Bangladesh. Applicants must fulfil the following requirements:

- Educational qualifications as applicable for Bangladeshi civil students or equivalent.
- Must have security clearance from respective Embassy/ High Commission in Bangladesh.
- Sex: Male and female.

NUMBER OF SEATS

The highest number of seats for 04 (four) years bachelor degree in engineering program is 65 for each of CE, CSE, EECE, ME and AE departments and 30 for NAME. The total number is 355. In general about 50% seats will be allocated to military officers. However, in case of the requirement of military students vacancy is less in any particular year, the deficient vacancy will be filled up by civil students. MIST also maintains quota for:

- Children of Military Personnel
- Children of Freedom Fighters
- Tribal Citizen
- Foreign Students

SUBMISSION OF APPLICATION- 2012

Instructions for Submission of e-Application

Application for the Admission Test- 2012 in MIST will be accepted only through online system from 01 Oct to 31 Oct 12. No manual application will be accepted. An applicant needs to deposit Tk. 600 (six hundred) only as application fee through SMS from Teletalk prepaid mobile phone. No fee will be accepted by MIST other than through SMS system. To complete the online application, an applicant must upload (mainly by using scanner) a copy of recent passport size coloured photograph (approximately 300X300 pixel and maximum 100 KB size) and signature (approximately 300X80 pixel and maximum 60 KB size). Both photograph and signature should be in jpg format. Applicants must read the details given in the 'Instructions and Information for MIST Admission Test- 2012' very carefully. They may also take the printout of the instructions. Following steps to be followed to submit the application for the MIST Admission Test- 2012. For female candidates the words he and his will mean she and her.

Step 1: Filing up Online Application Form

Go to MIST website www.mist.ac.bd and Click 'Online Application' box. From 'Online Application' box select 'Online Application Form for General Education (HSC/ Alim/ Equivalent) Examination Applicants' or 'Online Application Form for GCE (A Level/ Equivalent) Applicants'. Click 'Next'.

1. For General Education (HSC/ Alim/ Equivalent) Examination Applicants.

- a. **Applicant's Academic Information.** In the 'Application' box, put your roll number, registration number, name of board and year of passing both SSC and HSC examinations. Then select 'Next'.
- b. **Applicant's Personal Information.** In the next screen, applicant's name, date of birth, gender, father's name, mother's name and nationality will be displayed. Applicant's educational qualifications of SSC/ equivalent and HSC/ equivalent will also be displayed. In this screen the applicant needs to fill up certain information. These are:
- (I) **Choice of Department.** An applicant needs to put priority of choice of six engineering departments. For example, if an applicant wants to choose EECE Department as priority 1, then he needs to check the 'Radio' button under EECE in the first row. If CSE is the third choice, then the applicant needs to check the 'Radio' button under CSE in the third row. Thus all the departments have to be given a choice. Under each department only one 'Radio' button can be selected.
- (II) **Category of Candidature.** There are four options; General, Children of Freedom Fighters, Tribal Citizen and Children of Military Personnel. An applicant needs to check the appropriate 'Radio' button according to his category of candidature.
- (III) **Address.** An applicant needs to type his address. He is to select district and Upazilla from the 'Pull Down' menu.
- (IV) **Contact Mobile Number.** The applicant must give a **contact mobile number** of any operator (GP, Banglalink, Airtel, CityCell, Teletalk etc.) through which subsequent communication can be made. This mobile number is very important for subsequent communication (eg confirmation of receipt of application, eligible candidate list for admission test, admission test results etc) with the applicant.
- c. **Upload Photo & Signature.** An applicant is required to prepare two jpg format files each containing Passport size photo (with approximately 300X300 pixel and maximum 100 KB size) and scan copy of his signature (with approximately 300X80 pixel and maximum 60 KB size). He is to select 'Browse' button and upload the photo and signature from the concerned drive/location.
- d. **Validation Code.** There will be a validation code on the left side of the blank space. Type this code on the blank space.
- e. **Declaration.** Read the statement of confirmation declaring the correctness of the given information. If agreed to the statement, the applicant needs to check on the 'Radio' button. Then click on the 'Submit' button.

2. **For GCE (A Level/ Equivalent) Applicants.**

- a. **Applicant's Required Information.** The applicant needs to type his name, father's name, mother's name. He needs to select date of birth from the 'Pull Down' menu. He also needs to select the Gender 'Radio' button. Then click 'Next'.
- b. **Choice of Department.** An applicant needs to put priority of choice of six engineering departments. For example, if the applicant wants to choose EECE Department as priority 1, then he needs to check the 'Radio' button under EECE in the first row. If CSE is the third choice, then the applicant needs to check the 'Radio' button under CSE in the third row. Thus all the departments have to be given a choice. Under each department only one 'Radio' button can be selected.
- c. **Category of Candidature.** There are four options; General, Children of Freedom Fighters, Tribal Citizen and Children of Military Personnel. An applicant needs to check the appropriate 'Radio' button according to his category of candidature.
- d. **Address.** The applicant needs to type his address. He is to select district and Upazilla from the 'Pull Down' menu.
- e. **Contact Mobile Number.** The applicant must give a contact mobile number of any operator (GP, Banglalink, Airtel, CityCell, Teletalk, etc) through which subsequent communication can be made. This mobile number is very important for subsequent communication (e.g. confirmation of receipt of application, eligible candidate list for admission test, admission test results etc) with the applicant.
- f. **Educational Qualification.** Type the name of the Institution and select year of passing, grade of subjects from the 'Pull Down' menu for both 'O' level and 'A' level examinations.
- g. **Upload Photo & Signature.** An applicant is required to prepare two jpg format files each containing Passport size photo (with approximately 300X300 pixel and maximum 100 KB size) and scan copy of his signature (with approximately 300X80 pixel and maximum 60 KB size). He is to select 'Browse' button and upload the photo and signature from the concerned drive/location.
- h. **Validation Code.** There will a validation code on the left side of the blank space. Type this code on the blank space.
- i. **Confirmation.** Read the statement of confirmation declaring the correctness of the given information. If agreed to the statement, the applicant needs to check on the 'Radio' button. Then click on 'Submit'.

3. Then the applicant will see a preview page with his photo and signature along with other information. The applicant will also get an application serial number and user ID. This user ID will be required to deposit the application fee. The applicant will get a confirmation message that the applicant could complete step 1 in submitting the application. It is to be noted that the application process will not be completed until the application fee is deposited through SMS from Teletalk prepaid mobile phone.

Step 2: Depositing Application Fee through SMS

4. Each applicants needs to deposit Tk. 600 (six hundred) through Teletalk prepaid mobile phone within 24 (Twenty Four) hours after clicking on the 'Submit' button but within 01 November 2012. Following steps are to be followed to deposit application fee:

a. Go to SMS option in Teletalk prepaid mobile phone. Then type MIST <space> user ID. Then send to 16222. Example: Type MIST 66666 then send to 16222. The applicant needs to type his user ID in place of 66666.

b. If the SMS is sent correctly, the applicant will receive a six digit PIN along with his Name and amount of application fee. The applicant will be asked to confirm the process of depositing the application fee.

c. To confirm the process of depositing the Application Fee, type MIST <space> YES <space>PIN and send to 16222. Example: Type MIST YES 777777 then send to 16222. The applicant needs to type his PIN in place of 777777.

5. The applicant will then receive a confirmation SMS from MIST in his given contact mobile number that the application is finally submitted to MIST. He will also receive a User Name and a Password. This will be required for eligible applicants to download Admit Card from 18 November 2012 onwards.

6. **Physical Submission of Certificates.** Applicants of the categories of Children of Freedom Fighters (F), Tribal Citizen (T) and Children of Military Personnel (M) must submit required certificate/documents to MIST admission desk physically within 1700 hours of 31 October 2012. Required certificate/ documents are:

a. **Children of Freedom Fighters.** Attested copies of Freedom Fighter certificate of parents, issued by the Ministry of Freedom Fighters Affairs, People's Republic of Bangladesh.

b. **Tribal Citizen.** Attested copies of tribal citizen certificate issued by local UP chairman and countersigned by concerned Deputy Commissioner (DC).

c. **Children of Military Personnel.** For children of military personnel, certificate of authenticity issued by respective commanding officers (for serving parents); and by CORO/ Naval Secretary/ Air Secretary/ Record Office/ Drafting Office (for retired parents).

d. The submission of application of quota applicants i.e. Children of Freedom Fighters, Tribal Citizen and Children of Military Personnel will not be completed without submitting the required certificates/documents physically to MIST within 1700 hours of 31 October 2012.

7. **Contact in Case of any Difficulty.** In case of any difficulty for filling up the online application, the applicants are requested to contact the 'MIST Admission Desk'. Contact: mistadmission@mist.ac.bd Phone: 01556-565566, 01769-023896, 8000266

ADMISSION TEST

Selection of Candidates

A merit list of eligible candidates will be prepared on the basis of total GPA of Mathematics, Physics, Chemistry and one-third GPA of English earned in HSC/ Alim/ equivalent examination. Out of the merit list only short listed (approximately ten candidates for one vacant seat subject to availability of space) candidates will be allowed to take part in the written admission test of three hours. However, all eligible candidates of reserved seats (Children of Military Personnel, Children of Freedom Fighters, Tribal Citizens) and all eligible applicants with GCE 'A' level/ equivalent background shall also be allowed to seat for admission test. The list of eligible candidates to appear admission test will be displayed in the notice board and web site of MIST www.mist.ac.bd and will be intimated to individual through SMS to the contact mobile number given by the applicant.

Subjects and Syllabus for Written Admission Test

Ser	Subjects	Syllabus
1.	Mathematics	Syllabi of the current year of HSC Examinations of all Boards of Intermediate and Secondary Education
2.	Physics	
3.	Chemistry	
4.	English	Comprehension and functional

Distribution of Marks

Ser	Subjects	Marks
1.	Mathematics	80
2.	Physics	60
3.	Chemistry	40
4.	English	20
Total:		200

FINAL SELECTION

Minimum qualifying marks in the written admission test is 40%. But in special circumstances for fulfilment of specified number of seats, President Admission Committee may consider relaxation of this condition. Merit list of candidates for final selection and admission to MIST will be prepared on the basis of the following:

- Written Admission Test- 75%
- GPA of SSC/ Dakhil (without 4th subject)/ 'O' level/ equivalent examination- 10%
- Total GPA of Mathematics, Physics and Chemistry of HSC/ Alim/ 'A' level/ equivalent examination- 15%

In case of tie, merit position will be determined on the basis of marks obtained in admission test in Mathematics, Physics, Chemistry and English respectively. Further dispute will be solved giving priority of result of HSC over SSC examination. The list of selected candidates for admission to MIST will be notified in the notice board, web site of MIST www.mist.ac.bd and by SMS to contact mobile number given by the applicant.

ADMISSION PROCEDURE

Medical Check-up

Civil candidates selected provisionally are to undergo medical check-up at MIST medical centre. They will have to produce test reports of urine for R/E, blood for HBs Ag and blood grouping before the MIST medical authority. The medical authority will decide on the physical fitness of candidates for admission in MIST.

Admission

Candidates finally selected for admission will have to adhere to the following rules and procedures:

- Candidates have to complete admission formalities within a fixed period of time as decided by admission committee.
- Any candidate failing to complete admission formalities within the prescribed time will warrant cancellation of selection automatically.
- Any student failing to attend the class within two weeks of the commencement of the academic program will warrant cancellation of his/her admission and forfeiture of all fees including security deposit.
- Waiting lists will be prepared and displayed by the admission committee as per merit and be notified as per requirement.

Following documents are to be submitted during admission:

- Original copies of certificates and mark sheet of SSC/ Dakhil or equivalent examination.
- Original copies of certificate and mark sheet of HSC/ Alim or equivalent examination.
- Three copies of recent passport size coloured photograph of the candidate duly attested by class-I gazetted officer.
- Character certificate from the head of the last institute attended.
- Nationality certificate from UP Chairman or appropriate authority of Municipality/ City Corporation.
- For the Children of Freedom Fighters original copies of Freedom Fighter certificate of parents, issued by the Ministry of Freedom Fighters Affairs, People's Republic of Bangladesh.
- For Tribal Citizen; original certificate as a tribal citizen issued by local UP chairman and countersigned by concerned District Commissioner (DC).
- For Children of Military Personnel original certificate of authenticity, issued by respective commanding officers (for serving parents); and by CORO/ Naval Secretary/ Air Secretary/ Record Office/ Drafting Office (for retired parents).

Department Allotment

Departments will be allotted on the basis of individual merit position in the admission test at the end of admission against total vacancies. Individual choice for selection of departments will be given preference as far as possible.

Guardian's Consent

In the admission form selected civil candidates and their parents or guardians have to render consent certificate accepting terms and conditions to be formulated by MIST authority from time to time.

TUITION AND OTHER FEES

All civil and military students (where applicable) will be required to pay tuition and other fees as follows (subject to amendment from time to time):

	Category	Amount (tk)
Once during admission	Admission Fee	10,000
	Registration Fee	450
	Security Money/ Caution Money	20,000
	Library Fee	4,000
	Identity Card Fee	100
Quarterly	Tuition Fee	900
	Lab & Training Equipment Maintenance Fee	600
	Medical Fee	900
	Sports Fee	300
	Students Welfare Fee	1,050
Term wise	Course Registration Fee	2,050
	Exam Fee	21,00
	Centre Fee	500
	Grade Sheet Fee	375
Yearly	Education Development Charge	25,000

Note :

1. Two pairs of uniforms will be provided by MIST tailor shop costing approximately tk 3,000.

HALL CHARGES

(For residential civil students)

Ser	Category	Amount (tk)	Remarks
1.	Security Deposit (One time)	5,000	Refundable
2.	Mess Advance (One time)	3,000	Refundable
3.	Admission Fee	1,000	
4.	Readmission Fee	500	As Applicable
5.	Identity Card	100	
6.	Establishment Charge	1000	Monthly
7.	Seat Rent	300	„
8.	Electricity, gas and water bill charge	250	„
9.	Maintenance & Cleaning	250	„
10.	Common Room Subscription	100	„
11.	Contingencies	100	„
12.	Messing	As per Mess bill	„

LABORATORY FACILITIES

CE Dept

- Environmental Engineering Laboratory
- Geotechnical Engineering Laboratory
- Structural Mechanics Laboratory
- Concrete Laboratory
- Transportation Engineering Laboratory
- Water Resources Engineering Laboratory
- Survey & Mapping Shop
- Estimating & Drawing Shop

CSE Dept

- Network Laboratory
- Software Engineering Laboratory
- Artificial Intelligence and VLSI Laboratory
- Micro Processor and Micro Controller Laboratory
- Digital Laboratory
- Interfacing Laboratory
- Image Processing Laboratory
- Multimedia and Graphics Laboratory
- Teachers' PC Laboratory

EECE Dept

- Electrical Circuit Laboratory
- Electrical Circuit Simulation Laboratory
- Computer Programming Laboratory
- Electrical Machine Laboratory
- Power System Laboratory
- Electronics & Digital Electronics Laboratory
- Electronics Circuit Simulation Laboratory
- Power Electronics Laboratory
- Instrumentation & Measurement Laboratory
- Communication Laboratory
- Digital Signal Processing Laboratory
- Microprocessor and interfacing Laboratory
- Control System Laboratory
- Switch Gear & Protection Laboratory
- VLSI Laboratory
- Digital Communication Laboratory

- Power System Protection Laboratory
- Microwave Engineering Laboratory
- Numerical Methods Laboratory

ME Dept

- Measurement & Quality Control Laboratory
- Thermodynamics Laboratory
- Refrigeration & Air Conditioning Laboratory
- Heat Transfer Laboratory
- Energy Laboratory
- Machine Tools Laboratory
- Material Production Process Laboratory
- Drawing Shop (CAD Lab)
- Heat Engine Laboratory
- Applied Mechanics Laboratory
- Fluid Mechanics Laboratory

AE Dept

- Applied Aerodynamics Laboratory
- Jet Propulsion Laboratory
- Radar Engineering Laboratory
- Avionics and Ground Electronics Laboratory
- Aero-structure Laboratory

NAME Dept

- Ship Design Laboratory
- Marine Machinery Laboratory
- Computer Aided Ship Design Laboratory
- Heat Engine Laboratory
- Ship Structure & Fabrication Laboratory
- Instrumentation Laboratory
- Refrigeration & Air Conditioning Laboratory
- Fluid Mechanics Laboratory
- Applied Mechanics Laboratory

Sc & Hum Dept

- Chemistry Laboratory
- Physics Laboratory

COURSE PATTERN AND CREDIT STRUCTURE

The program is covered by a set of theoretical courses along with a set of lab/ sessional (practical) courses to support them. The rules for assignment of credit are as follows:

- Theoretical Course - One contact hour of lecture per week per term is equivalent to one credit
- Sessional Courses - Credits for sessional course (practical class) are half of the contact hours per week per term
- Thesis/Project - Credits are also assigned to project and thesis works taken by the student. The amount of credits assigned to such works varies from one discipline to another

COURSE SYSTEM

- Introduction of letter grades and grade points instead of numerical grades following the guidelines of University Grant Commission (UGC)
- Continuous evaluation of student performance
- Promotion of student-teacher relation

COURSE DESIGNATION

- The first digit corresponds to the year/ level in which the students normally undertake the course
- The second digit is reserved for departmental uses. It usually identifies a specific area of study within the department
- The last digit is an odd number for theoretical course and an even number for sessional course

For example CE 361 means:

- CE - Departmental identification (Civil Engineering Department)
- 3 - Signifies level of courses (Level- 3)
- 6 - Subject code (reserved for departmental use)
- 1 - Odd digit designates a theoretical course

DISTRIBUTION OF CREDIT HOURS

CE Dept

Level	Term	Credit Hour
1	I	18.50
	II	21.00
2	I	20.00
	II	20.50
3	I	21.50
	II	23.00
4	I	19.00
	II	18.50
Total Credit Hours:		162.00

CSE Dept

Level	Term	Credit Hour
1	I	20.00
	II	20.75
2	I	20.25
	II	20.75
3	I	19.25
	II	20.75
4	I	20.75
	II	19.50
Total Credit Hours:		162.00

EECE Dept

Level	Term	Credit Hour
1	I	20.50
	II	19.00
2	I	21.00
	II	19.00
3	I	19.50
	II	20.50
4	I	21.00
	II	18.00
Total Credit Hours:		158.50

ME Dept

Level	Term	Credit Hour
1	I	20.50
	II	19.50
2	I	21.00
	II	19.75
3	I	20.50
	II	20.75
4	I	20.25
	II	19.75
Total Credit Hours:		162.00

AE Dept

Level	Term	Credit Hour	
		Aerospace	Avionics
1	I	20.25	20.25
	II	21.25	21.25
2	I	19.25	21.25
	II	18.75	19.50
3	I	21.50	19.75
	II	19.25	19.75
4	I	20.50	20.25
	II	20.75	19.50
Total Credit Hour:		161.50	161.50

NAME Dept

Level	Term	Credit Hour
1	I	19.25
	II	19.50
2	I	19.50
	II	20.25
3	I	20.25
	II	22.00
4	I	21.00
	II	19.50
Total Credit Hours:		161.25

Note: Minimum credit hour for awarding Engineering Degree for all departments is **157**.

PROGRAM REQUIREMENTS

Details of courses (subjects), contact hours, credit hours etc are shown separately at the end of this prospectus. However, these are subject to revision and updating prior to each academic year.

GRADING SYSTEM

Total performance of a student in a given program is based on a scheme of continuous assessment. For theory course, this continuous assessment is made through a set of class tests, evaluation, class participation, homework, assignment and term final examination. The assessment in sessional courses is made through observation of the student at work during the class, viva voce during lab hours, sessional reports and quizzes. Each course has a certain number of credits, which describes its corresponding weights. A letter grade with a specified number of grade point is awarded to each course for which a student is measured both by the number of credits completed satisfactorily and by the weighted average of the grade point earned. A minimum Grade Point Average (GPA) is essential for satisfactory progress. A minimum number of earned credits also have to be acquired in order to qualify for the degree. Letter grades and corresponding grade points is awarded in accordance with the provisions shown below:

Grade	Grade Points	Numerical Marking
A+	4.00	80% and above
A	3.75	75% to less than 80%
A-	3.50	70% to less than 75%
B+	3.25	65% to less than 70%
B	3.00	60% to less than 65%
B-	2.75	55% to less than 60%
C+	2.50	50% to less than 55%
C	2.25	45% to less than 50%
D	2.00	40% to less than 45%
F*	0.00	Below 40%
I	Incomplete	-
W	Withdrawn	-
X	-	Project/Thesis continuation

DISTRIBUTION OF MARKS

Theory Courses

Thirty percent (30%) of marks shall be allotted for continuous assessment i.e. class participation/observation, class attendance, homework, assignment and class tests. The remaining 70% marks will be allotted to term final examination, which will be conducted centrally by the Institute. There will be internal and external examiners for each course in the term final examination.

The distribution of marks for a given course is as follows:

Class Participation/Observations	05%
Class Attendance	05%
Homework Assignment and Class Test	20%
Final Examination (Sec A + Sec B)	70%
Total:	100%

Marks in Attendance

Basis for awarding marks for class participation and attendance is as follows:

Attendance	Marks
90% and above	100%
85% to less than 90%	90%
80% to less than 85%	80%
75% to less than 80%	70%
70% to less than 75%	60%
65% to less than 70%	50%
60% to less than 65%	40%
Below 60%	00%

Sessional Courses

The sessional or part of sessional courses will be conducted and assessed throughout the term. In addition, the concerned teacher shall arrange final quiz/ examination.

CALCULATION OF GPA AND CGPA

Grade Point Average (GPA) is the weighted average of the grade points obtained in all the courses passed/ completed by a student. For example, if a student passes/ completes n courses in a term having credits of C_1, C_2, \dots, C_n and his grade points in these courses are G_1, G_2, \dots, G_n respectively then:

$$GPA = \frac{\sum_{i=1}^n C_i * G_i}{\sum_{i=1}^n C_i}$$

The Cumulative Grade Point Average (CGPA) is the weighted average of the GPA obtained in all the terms passed/ completed by a student. For example, if a student passes/ completes n terms having total credits of TC_1, TC_2, \dots, TC_n and his GPA in these terms are $GPA_1, GPA_2, \dots, GPA_n$ respectively then:

$$CGPA = \frac{\sum_{i=1}^n TC_i * GPA_i}{\sum_{i=1}^n TC_i}$$

EXAMINATION SYSTEM

Home Work/ Assignment

Individual teacher will decide

Class Test

n + 1, where, n = no of credit hours of the course

Final Examination

Written examination for theory courses (Sec A + Sec B)

Referred/ Short Term

For failed students as per Examination Policy

REFERRED/ SHORT TERM EXAMINATION

Those who will not be able to clear all the subjects will require to appear in the Referred/ Short Term Examination fulfilling the conditions as per examination policy.

WITHDRAWAL POLICY

The MIST has been established with an aim of providing quality education in various disciplines of Engineering leading to BSc Engineering to be conferred by BUP. A definite standard of education and general discipline will be followed in every level of the program. The unsuccessful students will therefore be withdrawn from the institute.

DEFINITION OF TERMS

Permanent Withdrawal

It will imply a complete/permanent discontinuity from any course/ program of the institute.

Temporary Withdrawal

It means that the student has been allowed by the Academic Council, MIST to discontinue temporarily from any course/ program for a definite period. The student, so withdrawn, may re-enter the course as per terms and conditions as set by the authority.

Permanent Expulsion

It means expulsion permanently from the institution on disciplinary ground. A student, if expelled permanently will never be allowed to re-enter the course or similar program in MIST and be subjected to other terms and conditions as set by the authority while approving the permanent expulsion order.

Temporary Expulsion

It means expulsion from an academic course/program for a certain period on disciplinary ground. A student, if expelled temporarily, may be allowed to re-enter the course/program on expiry of the punishment period and on fulfillment of other terms and conditions (if any) as set by the authority while approving the temporary expulsion order.

GENERAL POLICY OF WITHDRAWAL

The under graduate (B.Sc.) Engineering programs, in the disciplines of CE, EECE, ME, CSE AE and NAME are planned for 04 regular levels, comprising of 08 regular terms. It is expected that all students will earn degree by clearing all the offered courses in the stipulated time. In case of failure the following policies will be adopted:

- Students failing in maximum two courses/ subjects in any level, each comprising of two regular terms will be allowed to appear in the referred/ re-examination on failed course(s)/ subject(s) after a short term as per academic schedule.
- Referred/ re-examination, after a short term is to be conducted within 02 (two) weeks of commencement of the next academic session at the latest.

- Students failing in maximum one course/subject in the referred/re-examination will be promoted to the next higher level. The failed course/subject will be termed as 'Backlog' subject and the students have to pass the 'Backlog' subject in the next scheduled referred/re-examination, but without any short term. Otherwise, he/she will be withdrawn permanently from the course/program.
- No student will be allowed to appear in the referred/re-examination in the same subject more than twice in the whole undergraduate program.
- Students in all levels will be allowed to appear in the referred/re-examination on two courses/subjects including the 'Backlog' one.
- Students will be promoted to the second term of each level irrespective of their results in the first term of the level.
- Students failing in three or more courses/subjects in any level, comprising of two regular terms, will be allowed to repeat the level once. Students repeating a level will be granted exemption for that/those subject(s) in which they earned 'B+' and above grade in the previous academic year. For a military student, repeating a level will be subject to the approval of the respective Services Headquarters.
- Students will be allowed to repeat a particular level only once in the whole undergraduate program.
- After level-4 referred/re-examination, if any military student fails in maximum one course/subject, but not the 'Backlog' subject, then he/she will leave MIST and will be allowed to appear in the next scheduled referred/re-examination of the respective course. In that examination if he/she cannot pass the course/subject, or if he/she does not appear in the referred examination within 06 (six) years of registration will lose the scope of completing graduation. This failure will also be recorded in the dossier of military student officers.
- In case of sickness, which leads to missing of more than 40% classes or miss term final examination (supported by requisite medical documents), students may be allowed to withdraw temporarily from that term and repeat the whole level with the regular level in the next academic session, subject to the approval of Academic Council, MIST. However, he/she has to complete the whole undergraduate program within 06 (six) academic years from the date of his/her registration.
- Whatever may be the cases, students have to complete the whole undergraduate program within 06 (six) academic years from the date of registration.
- Failure to secure/achieve minimum CGPA of 2.20 in two consecutive levels will also lead to withdrawal of the student from the program.

EXPULSION/ WITHDRAWAL ON DISCIPLINARY GROUND

Unfair Means

Adoption of unfair means may result in expulsion of a student from the program and so from the institution. The Academic Council of MIST will authorize such expulsion on the basis of recommendation of the Disciplinary Committee, MIST and as per policy approved by the affiliating university. Following would be considered as unfair means adopted during examinations and other contexts:

- Communicating with fellow students for obtaining help in the examination.
- Copying from another student's script/report/paper.
- Copying from desk or palm of a hand or from other incriminating documents.
- Possession of any incriminating document whether used or not.

Influencing Grades

Academic council of MIST may expel/withdraw any student for approaching directly or indirectly in any form to influence a teacher or MIST authority for grades.

Other Indiscipline Behaviour

Academic council of MIST may withdraw/expel any student on disciplinary ground, if any form of indiscipline or unruly behaviour is seen in him/her which may disrupt the academic environment/program or is considered detrimental to MIST's image.

Immediate Action by the Disciplinary Committee of MIST

The disciplinary committee, MIST may take immediate disciplinary action against any student of the institution. In case of withdrawal/expulsion, the matter will be referred to the academic council, MIST for post-facto approval.

WITHDRAWAL ON OWN ACCORD

Permanent Withdrawal

A student who has already completed some courses and has not performed satisfactorily may apply for a permanent withdrawal.

Temporary Withdrawal

A student, if he/she applies, may be allowed to withdraw temporarily from the program, subject to the approval of academic council of MIST, but he/she has to complete the whole program within 06 (six) academic years from the date of his/her registration.

EXAMINATION SCHEDULE

Examination schedule of all programs run at MIST is strictly adhered to and is not changed under any circumstance. Students failing to appear at any examination will miss the grading/credit of the same.

TEACHER-STUDENT INTERACTIONS

The academic system in MIST encourages students to come in close contact with the teachers. For promotion of high level of teacher – student’s interaction, a Course Coordinator (CC) is assigned to each course. Students are free to discuss with CC about all academic matters. Students are also encouraged to meet other teachers any time for help and guidance for academic matters. Heads of the departments, Director of Administration, Director of Students’ Welfare (DSW), Dean and Commandant address the students at some intervals. More so, monthly Commandant’s Parade is organised in MIST where all faculty members, staff and students are formed up, thereby increasing teacher-student interaction.

CONDUCT AND DISCIPLINE

During their stay in MIST all students are required to abide by the existing rules, regulations and code of conduct. Students are strictly forbidden to form or be members of student organisation or political party, club, society etc, other than those set up by MIST authority in order to enhance student’s physical, intellectual, moral and ethical development. Zero tolerance in regards of sexual abuse and harassment in any forms and drug abuse and addiction are strictly observed in the campus.

STUDENTS’ DRESS CODE

Civil students are to wear dress with displayed identity card as per “Dress Code” prescribed by MIST authority. Military students will put on uniform as per dress regulation of respective services. Dresscode for civil student is as follows:

Male Student		Female Student	
Summer	Winter	Summer	Winter
Ash coloured half sleeve shirt (tucked in), Black coloured full pants, Black Oxford shoes and Black socks.	Ash coloured full sleeve shirt (tucked in), Black coloured full pants, Blue jersey/ pull over (V-necked) Black Oxford shoes and Black socks.	Ash coloured three quarter sleeve Kamiz, White coloured Sallowar and Dopatta, Black ladies shoes and socks/ Black sandle shoes.	Ash coloured three quarter sleeve Kamiz, White coloured Sallowar and Dopatta, Navy Blue cardigan (if required), Black ladies shoes and socks/ Black sandle shoes.



GRADUATION CEREMONY



CLASS IN PROGRESS



PROJECT FAIR



REGULATORY BODIES MEETING



MIST STUDENTS AT KENNEDY SPACE CENTRE, NASA, FLORIDA, USA



MACHINE SHOP



PHYSICS LAB



TRAINING VISIT



SPORTS ACTIVITIES



CULTURAL ACTIVITIES



FITNESS CENTER



TEACHERS' ACCOMODATION



OSMANY HALL



STUDENT OFFRS' MESS

CIVIL ENGINEERING

Total Credit Hours: 162

Level-1, Term-I

Course Code	Course Title	Contact Hour	Credit Hour
CE 100	Civil Engineering Drawing	3	1.5
CE 101	Analytic Mechanics	3	3
Phy 101	Physical Optics, Waves and Oscillation, Heat and Thermodynamics	3	3
Chem 103	Chemistry I	3	3
Chem 114	Inorganic Quantitative Analysis	3	1.5
Math 137	Differential and Integral Calculus, Matrices	3	3
Hum 175 / Hum 155	Government / Sociology	2	2
Shop 132	Workshop Sessional	3	1.5
Total:		23	18.5

Level-1, Term-II

Course Code	Course Title	Contact Hour	Credit Hour
CE 102	Computer Aided Drafting	3	1.5
CE 103	Surveying and spatial information Engineering	4	4
Phy 105/ Chem 105	Structure of Matter, Electricity and Magnetism and Modern Physics/ Chemistry II	3	3
Phy 102	Physics Laboratory	3	1.5
Math 139	Differential Equations and Statistics	3	3
EECE 165	Basic Electrical Technology	3	3
Hum 185	English	2	2
Hum 186	Developing English Language Skills	3	1.5
CE 104	Practical Surveying	3.0 Weeks	1.5
Total:		*27	21

Level-2, Term-I

Course Code	Course Title	Contact Hour	Credit Hour
CE 200	Details of Construction	3	1.5
CE 201	Engineering Materials	3	3
CE 202	Materials Sessional	3	1.5
CE 203	Engineering Geology & Geomorphology	3	3
CE 211	Mechanics of Solids I	3	3
CE 204	Computer Programming Sessional	3	1.5
CE 210	GIS and Remote Sensing	3	1.5
Math 237	Laplace Transform and Vector Analysis	3	3
Total:		26	20

Level-2, Term-II

Course Code	Course Title	Contact Hour	Credit Hour
CE 205	Numerical Methods	2	2
CE 206	Engineering Computations Sessional	3	1.5
CE 208	Quantity Surveying	3	1.5
CE 213	Mechanics of Solids II	3	3
CE 261	Fluid Mechanics	3	3
CE 262	Fluid Mechanics Sessional	3	1.5
CE 207	Applied Mathematics for Engineers	3	3
CE 212	Structural Mechanics & Materials Sessional	3	1.5
CE 214	Architectural, Engineering and Planning Appreciation	3	1.5
Total:		28	20.5

Level-3, Term-I

Course Code	Course Title	Contact Hour	Credit Hour
CE 311	Structural Analysis & Design I	4	4
CE 315	Design of Concrete Structures I	3	3
CE 331	Environmental Engineering I	3	3
CE 341	Principle of Soil Mechanics	4	4
CE 342	Geotechnical Engineering Laboratory	3	1.5
CE 332	Environmental Engineering Laboratory	3	1.5
CE 301	Professional Practices and Communication	3	3
CE 302	Professional Practices and Communication Sessional	3	1.5
Total:		26	21.5

Level-4, Term-I

Course Code	Course Title	Contact Hour	Credit Hour
CE 400	Project & Thesis	3	1.5
CE 401	Project Planning & Construction Management	3	3
CE 411	Structural Analysis & Design II	3	3
CE 463	Hydrology, Irrigation & Flood Management	3	3
CE 441	Foundation Engineering	3	3
CE 451	Transportation Engineering II: Pavement Design and Railway Engineering	4	4
CE 452	Transportation Engineering Sessional I: Highway Materials and Transportation Engineering Design	3	1.5
Total:		22	19

Level-3, Term-II

Course Code	Course Title	Contact Hour	Credit Hour
CE 316	Concrete Structures Design Sessional I	3	1.5
CE 317	Design of Concrete Structures II	3	3
CE 300	Civil Engineering Students' Internship Program (CESIP)	4 Weeks	1.5
CE 319	Design of Steel Structures	3	3
CE 320	Steel Structures Design Sessional	3	1.5
CE 351	Transportation Engineering I: Transportation Planning and Traffic Engineering	3	3
CE 361	Open Channel Flow	4	4
CE 362	Open Channel Flow Sessional	3	1.5
CE 333	Environmental Engineering II	4	4
Total:		26*	23

Level-4, Term-II

Course Code	Course Title	Contact Hour	Credit Hour	Remarks
CE 400	Project & Thesis	6	3	
CE 410	Concrete Structures Design Sessional II	3	1.5	
CE 403	Socio-economic Aspects of Development Project	3	3	Select Any One
CE 405	Business and Carrier Development	3	3	
CE 413	Introduction to Steel-Concrete Composite Structure	2	2	Select Any Two
CE 415	Prestressed Concrete	2	2	
CE 417	Design of Concrete Structures III	2	2	
CE 419	Introduction to Finite Element Method	2	2	
CE 421	Dynamics of Structures	2	2	
CE 412	Computer Aided Analysis and Design of Structures Sessional	3	1.5	
CE 433	Solid and Hazardous Waste Management	2	2	Select Any Two
CE 435	Environmental Pollution Management	2	2	
CE 437	Environmental and Sustainable Management	2	2	

CE 432	Design of Water Supply, Sanitation and Sewerage Systems	3	1.5	
CE 443	Earth Retaining Structures	2	2	Select Any Two
CE 445	Elementary Soil Dynamics	2	2	
CE 447	Soil-Water Interaction	2	2	
CE 442	Geotechnical Engineering Design Sessional	3	1.5	
CE 453	Transportation Engineering III: Traffic Engineering Design & Management	2	2	Select Any Two
CE 455	Transportation Engineering IV: Pavement Management, Drainage & Airports	2	2	
CE 457	Transportation Engineering V: Urban Transportation Planning & Management	2	2	
CE 454	Transportation Engineering Sessional II: Pavement Design and Traffic Studies	3	1.5	
CE 465	Groundwater Engineering	2	2	Select Any Two
CE 469	River Engineering	2	2	
CE 471	Hydraulic Structures	2	2	
CE 467	Flood Mitigation and Management	2	2	
CE 473	Coastal Engineering	2	2	
CE 472	Water Resources Engineering Sessional	3	1.5	
	Total:	26	18.5	
	G Total:	163	162	

COMPUTER SCIENCE AND ENGINEERING

Total Credit Hours-162.00

Level-1, Term-I

Course Code	Course Title	Contact Hour	Credit Hour
CSE-100	Computer Fundamentals Sessional	3	1.5
EECE-163	Electrical Circuit Analysis	3	3
EECE-164	Electrical Circuit Analysis Sessional	1.5	0.75
ME-181	Basic Mechanical Engineering	2	2
ME-182	Basic Mechanical Engineering Sessional	1.5	0.75
Math-141	Mathematics-1(Differential and Integral Calculus)	3	3
Phy-103	Physics	3	3
Phy-104	Physics Sessional	3	1.5
Hum 101	English	3	3
Hum 102	English Sessional	3	1.5
Total:		26	20

Level-1, Term-II

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-101	Discrete Mathematics	3	3	
CSE-105	Structured Programming Language	3	3	CSE-100
CSE-106	Structured Programming Language Sessional	3	1.5	
EECE-169	Electronic Devices and Circuits	3	3	EECE-163
EECE-170	Electronic Devices and Circuits Sessional	1.5	0.75	
CE-150	Engineering Drawing & CAD Sessional	3	1.5	
Chem-101	Chemistry	3	3	
Math-143	Mathematics-II (Integral Calculus, Ordinary and Partial Differential Equations)	3	3	
Hum-103	Engineering Economics	2	2	
Total:		24.5	20.75	

Level-2, Term-I

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-201	Digital Logic Design	3	3	
CSE-202	Digital Logic Design Sessional	3	1.5	
CSE-203	Data Structures	3	3	CSE-105
CSE-204	Data Structures Sessional	3	1.5	
CSE-205	Object Oriented Programming Language	3	3	CSE-105
CSE-206	Object Oriented Programming Language Sessional	3	1.5	
EECE-269	Electrical Drives and Instrumentation	3	3	EECE-169
EECE-270	Electrical Drives and Instrumentation Sessional	1.5	0.75	
Math-245	Mathematics-III (Vector Analysis, Matrices, and Fourier Analysis)	3	3	
Total:		25.5	20.25	

Level -2, Term-II

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-210	Assembly Language Programming Sessional	3	1.5	
CSE-211	Digital Electronics and Pulse Technique	3	3	EECE-169
CSE-212	Digital Electronics and Pulse Technique Sessional	1.5	0.75	
CSE-213	Computer Architecture	3	3	CSE-201
CSE-215	Algorithms	3	3	CSE-101 CSE-203
CSE-216	Algorithms Sessional	3	1.5	
CSE-217	Theory of Computation	3	3	
Math-247	Mathematics – IV (Complex variable and Laplace Transform)	3	3	
Hum-201	Financial and Managerial Accounting	2	2	
Total:		24.5	20.75	

Level-3, Term-I

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-300	Software Development Sessional	3	1.5	
CSE-301	Database Management Systems	3	3	
CSE-302	Database Management Systems Sessional	3	1.5	
CSE-303	Compiler	3	3	CSE-217
CSE-304	Compiler Sessional	1.5	0.75	
CSE-305	Microprocessors, Microcontroller and Assembly Language	3	3	CSE-201
CSE-306	Microprocessors, Microcontroller and Assembly Language Sessional	1.5	0.75	
CSE-307	Operating System	3	3	
CSE-308	Operating System Sessional	1.5	0.75	
Math-345	Mathematics-V (Statistics and Coordinate Geometry)	2	2	
Total:		24.5	19.25	

Level-3, Term II

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-311	Numerical Analysis	3	3	
CSE-313	Mathematical Analysis for Computer Science	3	3	
CSE-315	Digital System Design	3	3	CSE 309
CSE-316	Digital System Design Sessional	1.5	0.75	
CSE-317	Data and Telecommunication Engineering	3	3	
CSE-318	Data and Telecommunication Engineering Sessional	3	1.5	
CSE-319	Software Engineering and Information System Design	4	4	
CSe-320	Software Engineering and Information System Design Sessional	3	1.5	
CSE-350	Industrial Training	4 Weeks	1	
Total:		23.5	20.75	

Level-4, Term-I

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-400	Project or Thesis	6	3	
CSE-401	Artificial Intelligence	3	3	
CSE-402	Artificial Intelligence Sessional	1.5	0.75	
CSE-403	Computer Network	3	3	CSE-317
CSE-404	Computer Network Sessional	3	1.50	
CSE-405	Simulation and Modelling	3	3	
CSE-406	Simulation and Modelling Sessional	1.5	0.75	
CSE-410	Internet Programming Sessional	1.5	0.75	
CSE-4XX	Option-I	3	3	
HUM-40X	Option-II	2	2	
Total:		27.5	20.75	

Level-4, Term-II

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-400	Project or Thesis	6	3	
CSE-411	VLSI Design	3	3	
CSE-412	VLSI Design Sessional	1.5	0.75	
CSE-413	Computer Graphics	3	3	
CSE-414	Computer Graphics Sessional	3	1.5	
CSE-415	Computer interfacing	3	3	
CSE-416	Computer interfacing Sessional	3	1.5	
CSE-4XO	Option-III	3	3	
CSE-4XE	Option-III Sessional	1.5	0.75	
Total:		27	19.50	

Option-I

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-421	Basic Graph Theory	3	3	
CSE-423	Fault Tolerant System	3	3	
CSE-425	Basic Multimedia Theory	3	3	
CSE-427	Digital Image Processing	3	3	
CSE-429	Data and Network Security	3	3	
CSE-431	Object Oriented Software Engineering	3	3	
CSE-433	Artificial Neural Network and Fuzzy System	3	3	
CSE-435	Parallel Algorithm	3	3	

Option-II

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
HUM-403	Government	2	2	
HUM-405	Sociology	2	2	
HUM-407	Engineering Ethics	2	2	
HUM-409	Management Information System	2	2	

Option-III

Course Code	Course Title	Contact Hour	Credit Hour	Pre-requisite
CSE-441	Machine Learning	3	3	
CSE-442	Machine Learning Sessional	1.5	0.75	
CSE-443	Pattern Recognition	3	3	
CSE-444	Pattern Recognition Sessional	1.5	0.75	
CSE-445	Digital Signal Processing	3	3	
CSE-446	Digital Signal Processing Sessional	1.5	0.75	
CSE-447	Advanced Networks Programming	3	3	
CSE-448	Advanced Networks Programming Sessional	1.5	0.75	
CSE-449	Mobile and Ubiquitous Computing	3	3	
CSE-450	Mobile and Ubiquitous Computing Sessional	1.5	0.75	

ELECTRICAL, ELECTRONIC AND COMMUNICATION ENGINEERING

Total Credit Hours: 158.5

Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 101	Electrical Circuits I	3	3
PHY 111	Phy I (Waves and Oscillation, Optics and Thermal Physics)	3	3
PHY 112	Phy I Laboratory	3	1.5
MATH 111	Differential and Integral Calculus	4	4
CE 152	Engineering Drawing	3	1.5
CHEM 101	Chem I	3	3
CHEM 114	Inorganic and Quantitative Analysis Laboratory	3	1.5
HUM 127	Sociology	3	3
Total:		25	20.5

Level-2, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 201	Electronics I	3	3
EECE 203	Electrical Machines I	3	3
ME 263	Fundamentals of Mechanical Engineering	3	3
ME 264	Fundamentals of Mechanical Engineering Laboratory	3	1.5
Math 211	Math (Ordinary and Practical Differential equation) (3)	3	3
Hum 235	English	3	3
Hum 272	Developing English Skills Laboratory	3	1.5
Hum 277	Fundamentals of Economics	3	3
Total:		24	21

Level-1, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 105	Electrical Circuits II	3	3
EECE 106	Electrical Circuits Laboratory	3	1.5
EECE 110	Electrical Circuits Simulation Laboratory	3	1.5
PHY 113	Phy II (Electricity and Magnetism, Modern Physics and Mechanics)	3	3
PHY 114	Phy II Laboratory	3	1.5
MATH 115	Vector analysis, Matrices and Geometry	4	4
CSE 109	Computer Programming	3	3
CSE 110	Computer Programming Laboratory	3	1.5
Total:		25	19

Level-2, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 205	Electrical Machines II	3	3
EECE 206	Electrical Machines laboratory	3	1.5
EECE 207	Electronics II	3	3
EECE 208	Electronics Laboratory	3	1.5
EECE 210	Electronic Circuit Simulation Laboratory	3	1.5
EECE 212	Numerical Technique Laboratory	3	1.5
Math 213	Math (Complex Variable & Statistics) (4)	4	4
Hum 279	Financial and Managerial Accounting	3	3
Total:		25	19

Level-3, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 301	Continuous Signals and Linear Systems	3	3
EECE 303	Digital Electronics	3	3
EECE 304	Digital Electronics Laboratory	3	1.5
EECE 305	Power System I	3	3
EECE 306	Power System I Lab	3	1.5
EECE 307	Electrical Properties of Material	3	3
EECE 313	Instrumentation and Measurement	3	3
EECE 314	Electrical Services Design	3	1.5
Total:		24	19.5

Level-3, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
ME 393	Industrial Management	3	3
EECE 309	Communication Theory	3	3
EECE 310	Communication Laboratory	3	1.5
EECE 311	Digital Signal Processing I	3	3
EECE 312	Digital Signal Processing I Laboratory	3	1.5
EECE 315	VLSI-1	3	3
EECE 316	VLSI-1 Lab	3	1.5
EECE 317	Engineering Electromagnets	3	3
EECE 320 #	Industrial Training/attachment	3/4 weeks	1
Total:		24	20.5

#EECE 320 (Industrial Training/attachment) will be conducted after the term end exam of term-2.

Level-4, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
EECE 400	Project/ Thesis	6	3
EECE 401	Control System I	3	3
EECE 402	Control System I Laboratory	3	1.5
EECE 403	Telecommunication Engineering	3	3
EECE 405	Solid State Devices	3	3
EECE 4 **	Elective I	3	3
EECE 4 **	Elective II	3	3
EECE 4 **	Elective II Lab	3	1.5
Total:		27	21

Level-4, Term-II

Course Code	Course Name	Contact Hour	Credit Hour
EECE 400	Project/Thesis	6	3
EECE 407	Microprocessors and Interfacing	3	3
EECE 408	Microprocessor and Interfacing Laboratory	3	1.5
EECE 4 **	Elective III	3	3
EECE 4 **	Elective IV	3	3
EECE 4 **	Elective V	3	3
EECE 4 **	Elective V Laboratory	3	1.5
Total:		24	18

Note: Students will be assigned one of the three groups viz power, electronics and communications. A student will have to take at least 3 elective theory courses from the respective group. The remaining (2) elective theory courses may be selected from the respective group or other groups or interdisciplinary group or combination of these groups.

Power

Course Code	Course Name	Credit Hour
EECE 471	Power System II	3
EECE 473	Power Electronics	3
EECE 474	Power Electronics Laboratory	1.5
EECE 475	Power Plant Engineering	3
EECE 477 or EECE 483	Power System Protection OR High Voltage Engineering	3
EECE 478 or EECE484	Power System Protection Laboratory OR High Voltage Engineering Laboratory	1.5
EECE 479	Power System Reliability	3
EECE 481	Power System Operation and Control	3
EECE 485	Electrical Machines III	3

Electronics

Course Code	Course Name	Credit Hour
EECE 451	Processing and Fabrication Technology	3
EECE 453	Analog Integrated Circuits	3
EECE 455	Compound Semiconductor and Hetero-junction Device	3
EECE 457	VLSI II	3
EECE 458	VLSI II Laboratory	1.5
EECE 459	Opto-electronics	3
EECE 461	Semiconductor Device Theory	3

Communication

Course Code	Course Name	Credit Hour
EECE 431	Digital Signal Processing II	3
EECE 433	Microwave Engineering	3
EECE 434	Microwave Engineering laboratory	1.5
EECE 435	Optical Fiber Communication	3
EECE 437	Digital Communication	3
EECE 438	Digital Communication Laboratory	1.5
EECE 439	Mobile Cellular Communication	3
EECE 441	Random Signals and Processes	3
EECE 443	Satellite Communication	3
EECE 444	Satellite Communication Laboratory	1.5

Interdisciplinary

Course Code	Course Name	Credit Hour
EECE 421	Control System II	3
EECE 422	Control System II Laboratory	1.5
EECE 423	Numerical Methods	3
EECE 424	Numerical Methods Laboratory	1.5
EECE 425	Biomedical Instrumentation	3
EECE 426	Biomedical Instrumentation Laboratory	1.5
EECE 427	Radar Engineering	3
EECE 428	Radar Engineering Laboratory	1.5
EECE 491	Sonar and Underwater Engineering	3
EECE 492	Sonar and Underwater Engineering Laboratory	1.5
EECE 293	Electronic Warfare	3
EECE 494	Electronic Warfare Laboratory	1.5
EECE 495	Avionics Engineering	3
EECE 496	Avionics Engineering laboratory	1.5
CSE 451	Computer Networks	3
CSE 452	Computer Networks Laboratory	1.5
CSE 491	Microprocessor System Design	3
CSE 492	Microprocessor System Design Laboratory	1.5

MECHANICAL ENGINEERING

Total Credit Hours: 162.00

LEVEL-1, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
Phy 105	Structure of Matter, Electricity and Magnetism and Modern Physics	3	3
Chem 101	Chemistry-1	3	3
Math 161	Differential and Integral Calculus	4	4
ME161	Introduction to Mechanical Engineering	3	3
EECE159	Fundamentals of Electrical Engineering	3	3
Chem 114	Inorganic Quantitative Analysis Sessional	3	1.5
EECE160	Fundamental of Electrical Engineering Sessional	3/2	0.75
Shop 160	Foundry and Welding Shop Sessional	3/2	0.75
ME 160	Mechanical Engineering Drawing-1	3	1.5
Total:		25	20.5

LEVEL-1, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
Phy 107	Waves and Oscillation, Geometrical Optics and Wave Mechanics	3	3
Chem 141	Chemistry of Engineering Materials	3	3
Math 161	Vector analysis, Matrices and Coordinate Geometry	4	4
ME 171	Computer Programming Language	3	3
Hum 101	English	2	2
Hum 102	Technical Report Writing and Presentation	3	1.5
Phy 102	Physics Sessional	3	1.5
ME 172	Computer Programming Language Sessional	3/2	0.75
Shop 170	Machine Shop Practice	3/2	0.75
Total:		24	19.5

LEVEL -2, TERM - I

Course Code	Course Name	Contact Hour	Credit Hour
ME 241	Engineering Mechanics	3	3
EECE 259	Electrical and Electronics Technology	4	4
Math 261	Ordinary and partial Differential Equation	4	4
ME 201	Basic Thermodynamics	4	4
Hum ¹	Select from the prescribed courses	3	3
EECE 260	Electrical and Electronics Technology Sessional	3	1.5
ME 202	Basic Thermodynamics Sessional	3/2	0.75
ME 242	Engineering Mechanics Sessional	3/2	0.75
Total:		24	21

LEVEL-2, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
ME 291	Metallic Materials	3	3
ME 261	Numerical Analysis	3	3
ME 243	Mechanics of Solids	3	3
Math 263	Fourier Analysis, Harmonic functions, Laplace Transform and Complex variable	4	4
Hum ¹	Select from the prescribed courses	3	3
ME 292	Metallic Materials Sessional	3/2	0.75
ME 262	Numerical Analysis Sessional	3/2	0.75
ME 244	Mechanics of solids Sessional	3/2	0.75
ME 260	Mechanical Engineering Drawing –II	3	1.5
Total:		23.5	19.75

LEVEL-3, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
ME 341	Machine Design –1	3	3
ME 321	Fluid Mechanics – 1	3	3
ME 345	Mechanics of Machinery	4	4
ME 301	Conduction and Radiation Heat Transfer	3	3
ME 361	Instrumentation and Measurement	3	3
ME 342	Machine Design Sessional-1	3/2	0.75
ME 322	Fluid Mechanics Sessional-1	3/2	0.75
ME 346	Mechanics of Machinery Sessional	3	1.5
ME 302	Heat Transfer Sessional	3/2	0.75
ME 362	Instrumentation and Measurement Sessional	3/2	0.75
Total:		25	20.5

LEVEL –3, TERM – II

Course Code	Course Name	Contact Hour	Credit Hour
ME 331	Production Processes	4	4
ME 323	Fluid Mechanics – II	3	3
ME 343	Machine Design – II	3	3
ME 381	Measurement and Quality Control	3	3
ME 303	Convection, Boiling, Condensation and Mass Transfer	3	3
ME 332	Production Process Sessional	3/2	0.75
ME 324	Fluid Mechanics Sessional-II	3/2	0.75
ME 344	Machine Design Sessional-II	3/2	0.75
ME 382	Measurement and Quality Control Sessional	3/2	0.75
ME 304	Heat and Mass Transfer Sessional	3/2	0.75
ME 372 *	Industrial Training	4 weeks	1.00
Total:		23.5 + 04 Weeks	20.75

*It will be conducted after the completion of Level- 3, at any convenient time as can be arranged by the Department.

LEVEL- 4, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
ME 421	Fluid Machinery	3	3
ME 431	Machine Tools	3	3
ME 401	Internal Combustion Engines	3	3
Optional I ²	Selected from prescribed optional subjects	3	3
Optional II ²	Selected from prescribed optional subjects	3	3
ME 422	Fluid Machinery Sessional	3/2	0.75
ME 432	Machine Tools Sessional	3/2	0.75
ME 402	Heat Engines Sessional	3/2	0.75
ME 400	Project and Thesis – 1	6	3
Total:		25.5	20.25

LEVEL- 4, TERM – II

Course Code	Course Name	Contact Hour	Credit Hour
ME 403	Power Plant Engineering	3	3
Optional III ²	Selected from prescribed optional subjects	3	3
Optional IV ²	Selected from prescribed optional subjects	3	3
Optional V ²	Selected from prescribed optional subjects	3	3
ME 481	Industrial Management	4	4
ME 404	Steam Laboratories Sessional	3/2	0.75
ME 400	Project and thesis – II	6	3
Total:		23.5	19.75

Notes:

1. Students can choose from a number of humanities courses as follows, offered by Humanities Department:
Hum 201: Sociology
Hum 203: Government
Hum 213: Principles of Accounting.
Hum 223: Economics
Hum 227: Industrial Sociology
2. Students can choose from optional courses offered by the Department of Mechanical Engineering.

AERONAUTICAL ENGINEERING

Total Credit Hours: 160.75

LEVEL-1, TERM-I (Aerospace & Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
Phy 115	Physics I (Waves and Oscillation, Optics and Thermal Physics)	3	3
AEAV 101	Electrical Circuit Analysis-I	3	3
Math 121	Math I (Differential and Integral Calculus)	3	3
Math 123	Math II (Complex Variables and Vector Analysis)	3	3
AEAS 101	Introduction to Aeronautical Engineering	3	3
Phy 116	Physics Sessional	3	1.5
AEAV 102	Electrical Circuit Analysis-I Sessional	3	1.5
AEAS 110	Aeronautical Engineering Drawing-1	3	1.5
AEAS 108	Workshop Technology Sessional -I	3/2	0.75
Total:		25.5	20.25

LEVEL-2, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-201	Engineering Mechanics (Statics and Dynamics)	4	4
AEAV-205	Numerical Analysis and Application	3	3
AEAV 211	Fundamentals of Electronics	4	4
Math-221	Math IV (Matrices, Coordinate Geometry and Harmonic Analysis)	3	3
HUM XXX	Select from prescribed courses	3	3
AEAV-206	Numerical Analysis and Application Sessional	3	1.5
AEAV-212	Fundamentals of Electronics Sessional	1.50	0.75
Total:		21.5	19.25

LEVEL 1, TERM-II (Aerospace and Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
Phy 117	Phy II (Electricity and Magnetism, Modern Physics and Mechanics)	3	3
Chem 105	Chemistry (Atomic Structure, Thermo-chemistry and Chemistry of Engineering Materials)	4	4
Math 125	Math III (Ordinary and Partial Differential Equations and Laplace Transforms)	3	3
AEAV 103	Computer Programming and Applications	3	3
Hum 111	English	3	3
Hum 112	Technical Report Writing and Presentation	3	1.5
Chem 106	Chemistry Sessional	3	1.5
AEAV 104	Computer Programming and Applications Sessional	3	1.5
AEAS 112	Workshop Technology Sessional -II	3/2	0.75
Total:		26.5	21.25

LEVEL-2, TERM-I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 201	Electrical Circuit Analysis-II	3	3
AEAS 201	Engineering Mechanics (Statics and Dynamics)	4	4
AEAV 203	Electronics – I	3	3
AEAV 205	Numerical Analysis and Applications	3	3
Math 221	Math IV (Matrices, Coordinate Geometry and Harmonic Functions)	3	3
HumXXX	Select form the prescribed courses (XXX)	3	3
AEAV 202	Electrical Circuit Analysis-II Sessional	1.5	0.75
AEAV 206	Numerical Analysis and Applications Sessional	3.0	1.5
Total:		23.5	21.25

LEVEL-2, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-203	Fundamentals of Fluid Mechanics	3	3
AEAS-205	Mechanics of Solids	3	3
AEAS-207	Thermodynamics	3	3
Math-225	Math V (Fourier Analysis and Statistics)	3	3
HUM YYY	Select from prescribed courses	3	3
AEAS-206	Mechanics of Solids Sessional	3	1.5
AEAS-208	Thermodynamics Sessional	1.5	0.75
AEAS-210	Aeronautical Engineering Drawing-II	3	1.5
Total:		22.5	18.75

LEVEL-2, TERM-II (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS 203	Fundamentals of Fluid Mechanics	3	3
AEAV 207	Electronics – II	3	3
AEAV 209	Electro-mechanical System	3	3
AEAS 207	Thermodynamics	3	3
Math 225	Math V (Fourier Analysis and Statistics)	3	3
AEAV 208	Electronics– II Sessional	3	1.5
AEAS 208	Thermodynamics Sessional	1.5	0.75
AEAV 210	Electro-mechanical System Sessional	1.5	0.75
AEAS 210	Aeronautical Engineering Drawing-II	3	1.5
Total:		24	19.5

LEVEL-3, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-301	Heat Transfer	3	3
AEAS-303	Applied Aerodynamics and Computational Fluid Dynamics (CFD)	4	4
AEAS-305	Aerospace Propulsion	4	4
AEAS-307	Aircraft Loading & Structure Analysis	3	3
AEAS-309	Material Science	3	3
AEAS-322	Heat Transfer Sessional	3	1.5
AEAS-324	Applied Aerodynamics and CFD Sessional	3	1.5
AEAS-306	Aerospace Propulsion Sessional	1.5	0.75
AEAS-330	Material Science Sessional	1.5	0.75
Total:		26	21.5

LEVEL- 3, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV 301	Digital Systems	3	3
AEAV 303	Signals and Systems	3	3
AEAV 305	Communication Engineering	3	3
AEAS 303	Applied Aerodynamics and Computational Fluid Dynamics (CFD)	4	4
HumYYY	Select from the prescribed courses (YYY)	3	3
AEAV 302	Digital Systems Sessional	3	1.5
AEAS 324	Applied Aerodynamics and CFD Sessional	3	1.5
AEAV 306	Communication Engineering Sessional	1.5	0.75
Total:		23.5	19.75

LEVEL-3, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-311	Test and Measurement	3	3
AEAS-313	High Speed Aerodynamics	3	3
AEAS-315	Aerospace Vehicle Stability and Control	3	3
AEAS-317	Mechanics of Structures, Structural Vibration and Aero Elasticity	4	4
AEAS-319	Machine Design	3	3
AE-300	Industrial Training	4 Weeks	1
AEAS-312	Test and Measurement Sessional	1.5	0.75
AEAS-320	Machine Design Sessional	3	1.5
Total:		20.5	19.25

LEVEL-4, TERM-I (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-401	Computational Structural Analysis	3	3
AEAS-403	Industrial Management	3	3
AEAS-405	Aerospace Vehicle Design	4	4
AEAV-427	Control System	3	3
AEAS-XXX	Select from prescribed optional courses	3	3
AEAS-400	Project and Thesis	6	3
AEAS-406	Aerospace Vehicle Design Sessional	1.5	0.75
AEAS-416	Wind Tunnel Testing Sessional	1.5	0.75
Total:		25	20.5

LEVEL-3, TERM – II (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV-307	Electro-Magnetic Field Theory	3	3
AEAS- 311	Test and Measurement	3	3
AEAV-311	Aero-measurement and Instrumentation	3	3
AEAV-313	Digital Signal Processing	3	3
AEAV-325	Avionics Engineering - I	3	3
AE-300	Industrial Training	4 weeks	1
AEAV- 326	Avionics Engineering - I Sessional	3	1.5
AEAV-312	Aero-measurement and Instrumentation Sessional	3	1.5
AEAV-324	Digital Signal Processing Sessional	3/2	0.75
Total:		22.5	19.75

LEVEL-4, TERM – I (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV-401	Microwave Engineering	3	3
AEAV-403	Feedback Control System	3	3
AEAS-403	Industrial Management	3	3
AEAS-433	Aerospace Technology	3	3
AEAV-XXX	Selected from prescribed optional courses	3	3
AEAV-400	Project and Thesis	6	3
AEAV-402	Microwave Engineering Sessional	3	1.5
AEAV-404	Feedback Control System Sessional	1.5	0.75
Total:		25.5	20.25

LEVEL-4, TERM-II (Aerospace)

Course Code	Course Name	Contact Hour	Credit Hour
AEAS-407	Turbo Machinery	3	3
AEAS-409	Production, Planning and Control	3	3
AEAS-413	Space Engineering	4	4
AEAV-425	Avionics Technology	4	4
AEAS-YYY	Select from prescribed optional courses	3	3
AEAS-400	Project and Thesis	6	3
AEAV-426	Avionics Technology Sessional	1.5	0.75
Total:		24.5	20.75

LEVEL- 4, TERM – II (Avionics)

Course Code	Course Name	Contact Hour	Credit Hour
AEAV-405	Avionics Engineering - II	3	3
AEAV-407	Radar Engineering	3	3
AEAV-409	Microprocessor and Interfacing	3	3
AEAS-409	Production, Planning and Control	3	3
AEAV- YYY	Select from prescribed optional courses	3	3
AEAV -400	Project and Thesis	6	3
AEAV-408	Radar Engineering Sessional	1.5	0.75
AEAV-410	Microprocessor and Interfacing Sessional	1.5	0.75
Total:		24	19.5

List of Elective Courses to Aerospace Discipline (AEAS/AEAV YYY)

Any two courses (6 Credits) have to be taken from the following courses.

Course Code	Course Name	Level-Term	Contact Hour	Credit Hour
AEAS-417	Air Field Procedure	4-I/4-II	3.0	3.00
AEAS-419	Maintenance Management and Repair of Aircraft	4-I/4-II	3.0	3.00
AEAS-421	Aviation Safety	4-I/4-II	3.0	3.00
AEAS-423	Aerospace Management	4-I/4-II	3.0	3.00
AEAS-425	Pressurization and Air Conditioning systems	4-I/4-II	3.0	3.00
AEAS-427	Noise Control and Vibration	4-I/4-II	3.0	3.00
AEAS-429	Rotorcraft Performance	4-I/4-II	3.0	3.00
AEAS-431	Weapons Engineering	4-I/4-II	3.0	3.00
AEAS 435	Aircraft Structural Design	4-I/4-II	3.0	3.00

List of Elective Courses to Avionics Discipline (AEAS/AEAV XXX)

Any two courses (6.75 Credits) have to be taken by each student from the following list of courses:

Course Code	Course Name	Level-Term	Contact Hour	Credit Hour
AEAS-417	Air Field Procedure	4-I/4-II	3.0	3.00
AEAS-419	Maintenance Management and Repair of Aircraft	4-I/4-II	3.0	3.00
AEAS-421	Aviation Safety	4-I/4-II	3.0	3.00
AEAS-423	Aerospace Management	4-I/4-II	3.0	3.00
AEAV-413	Mobile Cellular Communication	4-I/4-II	3.0	3.00
AEAV-415	Satellite Communication	4-I/4-II	3.0	3.00
AEAV-417	Optoelectronics	4-I/4-II	3.0	3.00
AEAV-419	Electronics Warfare	4-I/4-II	3.0	3.00
AEAV-421	Optical Fiber Communication	4-I/4-II	3.0	3.00
AEAV-423	Digital Communication	4-I/4-II	3.0	3.00
AEAV-435	Computer Networks	4-I/4-II	3.0	3.00
AEAS-417	Air Field Procedure	4-I/4-II	3.0	3.00
AEAS-419	Maintenance Management and Repair of Aircraft	4-I/4-II	3.0	3.00
AEAS-421	Aviation Safety	4-I/4-II	3.0	3.00

NAVAL ARCHITECTURE AND MARINE ENGINEERING

Total Credit Hours: 161.25

Level-1, Term-I

Course Code	Course Name	Contact Hour	Credit Hour
Theoretical Courses			
Chem 101	Chemistry-1	3	3
Hum 101	English	2	2
Math 161	Differential Calculus and Integral Calculus	3	3
NAME 107	Basic Naval Architecture & Marine Engg	3	3
Phy 105	Structure of Matter, Electricity, Magnetism and Modern Physics	3	3
Sessional Courses			
ME 160	Mechanical Engineering Drawing-1	3	1.5
Chem 102	Chemistry Sessional-1	3	1.5
Shop 160	Foundry and Welding Shop Sessional	3	1.5
Shop 170	Machine Shop Sessional	1.5	0.75
Total		24.5	19.25

LEVEL-1, TERM-II

Course Code	Course Name	Contact Hour	Credit Hour
Theoretical Courses			
EECE 181	Electrical Engineering Principles	3	3
Phy 107	Waves and Oscillations, Geometrical Optics and Wave Mechanics	3	3
Math 163	Coordinate Geometry and ordinary Differential Equation	3	3
ME 171	Basic Thermal Engineering	3	3
NAME 157	Hydrostatics and Stability	3	3
Sessional Courses			
NAME 158	Ship Design Studio 1	3	1.5
ME 172	Basic Thermal Engineering Sessional	3	1.5
Phy 108	Physics Sessional	3	1.5
Total		24	19.5

LEVEL-2, TERM-I

Course Code	Course Name	Contact Hour	Credit Hour
Theoretical Courses			
ME 213	Fluid Mechanics	3	3
Math 261	Vector Analysis and Differential Equation (Special Types)	3	3
NAME 205	Shipbuilding Materials	3	3
NAME 229	Marine Engines and Fuels	3	3
ME 219	Engineering Mechanics	3	3
Sessional Courses			
ME 214	Fluid Mechanics Sessional	3	1.5
NAME 206	Shipbuilding Materials Sessional	1.5	0.75
NAME 208	Ship Design Studio - II	3	1.5
Hum 202	English Sessional	1.5	0.75
Total		24	19.5

LEVEL-2, TERM- II

Course Code	Course Name	Contact Hour	Credit Hour
Theoretical Courses			
Hum 223	Economics	3	3
EECE 281	Electrical and Electronic Technology for Marine Application	3	3
Math 263	Statistics, Partial Differential Equation and Matrices	3	3
NAME 253	Marine Hydrodynamics	3	3
ME 227	Mechanics of Structure	3	3
Sessional Courses			
EECE 282	Electrical and Electronic Technology for Marine Engineering Sessional	3	1.5
NAME 254	Marine Hydrodynamics Sessional	3	1.5
NAME 258	Ship Design Laboratory-III	3	1.5
ME 228	Mechanics of Structure Sessional	1.5	0.75
Total		25.5	20.25

LEVEL- 3, TERM- I

Course No.	Course Title	Contact hours	Credit hours
Theoretical Courses			
Hum 313	Principles of Accounting	3	3
NAME 301	Ship Structure	3	3
NAME 305	Shipbuilding Technology	3	3
NAME 307	Design of Marine Vehicles	3	3
Optional Courses (any one **)			
NAME 315	Port and Harbor Engineering	3	3
NAME 321	Finite Element Method for Ship Structure	3	3
NAME 347	Marine Pollution and Prevention	3	3
Sessional Courses			
NAME 300	Ship Design Project and Presentation	3	1.5
NAME 302	Ship Structure Sessional	1.5	0.75
NAME 308	Ship Design Studio IV	3	1.5
NAME 326	Computer Aided design (CAD) -1	3	1.5
Total		25.50	20.25

LEVEL- 3, TERM- II

Course No.	Course Title	Contact hours	Credit hours
Theoretical Courses			
Math 361	Fourier Analysis, Harmonic Function, Complex Variable and Lap lace Transforms	4	4
NAME 353	Resistance and Propulsion of Ships	3	3
NAME 359	Marine Engineering 1	3	3
NAME 369	Heat Transfer	3	3
Optional courses (any one**)			
NAME 357	Design of Special Ships	3	3
NAME 367	Economic and Social Aspects of Marine Transportation System	3	3
NAME 373	Computational Fluid Dynamics (CFD)	3	3

Sessional Courses

NAME 300	Ship Design Project and Presentation	3	1.5
NAME 354	Resistance and Propulsion of Ships Sessional	3	1.5
NAME 360	Marine Engineering Sessional 1	3	1.5
Training course/Internship *			
NAME 350	Shipyards Practice/Industrial Training (4 Weeks)	4 Weeks	1.5
Total		25 + 4 Weeks	22

* 04 Weeks Industrial/Shipyards Training course

LEVEL- 4, TERM- I

Course No.	Course Title	Contact hours	Credit hours
Theoretical Courses			
ME 479	Engineering Management	3	3
NAME 403	Dynamics of Marine Vehicles	3	3
NAME 409	Marine Engineering II	3	3
Optional courses (any two**)			
NAME 425	Shipbuilding Practice in Bangladesh	3	3
NAME 431	Ship Hull Vibration	3	3
NAME 435	Computer Aided Ship Production	3	3
NAME 437	Fishing Vessel Technology	3	3
NAME 445	Dredger and Dredging Technology	3	3
Sessional Courses			
NAME 400	Project and Thesis	6	3
NAME 426	Computer Aided Design (CAD) -II	3	1.5
NAME 430	Computer Programming in Ship Design	3	1.5
Total		27	18 + 3 = 21

LEVEL- 4. TERM- II

Course No.	Course Title	Contact hours	Credit hours
Theoretical Courses			
NAME 457	Ship Economics and Management	3	3
NAME 459	Ship Hull Maintenance and Repair	3	3
NAME 465	Navigation and Maritime Regulations	3	3
Optional courses (any two**)			
NAME 453	Power and Propulsion System	3	3
NAME 463	Ship Performance	3	3
NAME 469	Marine Production and Planning	3	3
NAME 477	Control Engineering	3	3
NAME 479	Shipyard Management	3	3
Sessional Courses			
NAME 400	Project and Thesis	6	3
NAME 460	Marine Engineering Sessional	3	1.5
Total		24	19.5

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LOCATION OF MIST



MIST AT FUTURE



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